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Introduction: While clinical practice guidelines are an effective means of improving healthcare, they are not always adequately implemented. A recent study of the German S3 guideline for schizophrenia (version 2019) revealed low rates of adherence among medical professionals (Khorikian-Ghazari *et al.* Eur Arch Psychiatry Clin Neurosci 2023, 1-12). The factors impeding adherence are numerous and encompass individual, contextual, and guideline-related elements. The present study (Halms *et al.* 2024 BMC Medicine 2024, 22(1) 311) examines the efficacy of a digital guideline version in comparison to print/PDF formats with respect to guideline knowledge.

Objectives: The primary aim of this study was to assess whether healthcare professionals using a digital version of the schizophrenia guideline achieved greater knowledge gains than those using traditional print or PDF formats. Secondary objectives included examining the usability of the formats, shared decision-making capabilities, and confidence in clinical decision-making.

Methods: A multicenter, cluster-randomized study was conducted in psychiatric hospitals in South Bavaria, Germany. Medical and psychological staff were divided into two groups: Implementation of the guideline via the digital MAGICapp platform or the conventional print/PDF version. The study comprised a baseline assessment (T0) and a post-intervention assessment (T1) after a six-month implementation phase. The primary outcome measure was guideline knowledge, measured by knowledge questions about the contents of the German S3 guideline for schizophrenia.

Results: A total of 217 subjects participated at the initial assessment (T0), while 120 subjects completed the follow-up assessment (T1). Both groups demonstrated notable gains in knowledge, yet no significant differences were observed between the two groups. At T0, 43.6% of the control group and 52.5% of the intervention group met the specified criterion. With regard to the primary outcome (≥ 30 of 46 knowledge questions and all five cardinal questions answered correctly), no significant difference was found at either T0 or T1 (T0: $\chi^2_{(1)} = 1.65, p = 0.199$, T1: $\chi^2_{(1)} = 0.34, p = 0.561$). Following the intervention, 58.2% of the control group and 63.5% of the intervention group met the primary outcome.

Conclusions: Overall, a significant improvement in guideline knowledge was demonstrated throughout the implementation process. The digital guideline version did not demonstrate superiority in knowledge gain, but it did show potential advantages in shared decision-making. The results may have been influenced by familiarity with conventional formats and barriers to implementing digital applications. The study highlights the importance of needs-based, structured implementation strategies, particularly for younger practitioners with less professional experience.

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EPV0898

Comparative Effectiveness of Olanzapine Versus Haloperidol in Treating Delirium: A Systematic Literature Review and Meta-Analysis of Randomized Trials

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Introduction: Delirium, as described in the DSM-V, is a disruption in attention and consciousness that develops over a brief period, representing an acute change from baseline awareness. First-generation antipsychotics, such as haloperidol, are often advised as the first line of pharmacological treatment. In comparison to haloperidol, olanzapine appears to be more beneficial in terms of efficacy and safety, according to a 2016 systematic review and meta-analysis of randomized clinical studies. However, most of the research included were single-center investigations with tiny sample numbers, diverse study demographics, and bias potential.

Objectives: The aim of this systematic review was to identify the current best evidence on the effectiveness of olanzapine versus haloperidol in various clinical settings to guide best practices for healthcare professionals. Also, this literature review seeks to provide a up-to-date synthesis of the current evidence on this subject.

Methods: We conducted a systematic search of four databases (PubMed, PsycINFO, CINAHL, and Cochrane Central) from inception through January 31st, 2024, using keywords related to delirium (acute confusion, confusion state, confusional state), olanzapine, and haloperidol. The search was limited to randomized controlled trials comparing olanzapine with haloperidol, without restrictions on dose, route of administration, or drug exposures. When analyzing outcomes with a robust number of studies, we applied a random-effects model. For outcomes with fewer studies, we used a fixed-effects model. Additionally, we conducted sensitivity and subgroup analyses. All statistical evaluations were performed using the RevMan software.

Results: Seven studies met our inclusion criteria. Haloperidol was associated with a significantly lower severity of delirium after 2-3 days of treatment compared to olanzapine, with a small effect size ($g = 0.40$, 95% CI [0.02; 0.78], $p = 0.04$) based on three studies ($n = 110$). However, no significant difference was observed after 4-7 days

($g = 0.09$, 95% CI [-0.26; 0.44], $p = 0.61$) across five studies ($n = 306$). There was no significant difference in overall side effect rates between haloperidol and olanzapine ($p = 0.29$, 7 studies, $n = 530$), but haloperidol resulted in significantly more extrapyramidal side effects ($p = 0.008$). Sedation as an adverse effect did not differ significantly between the two drugs ($p = 0.54$, 4 studies, $n = 284$).

Conclusions: Haloperidol may offer superior short-term efficacy in reducing delirium severity but is associated with a higher risk of extrapyramidal symptoms. No significant differences were found in long-term efficacy or sedation rates between olanzapine and haloperidol. These findings support the need for careful consideration of drug safety profiles in the treatment of delirium.

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EPV0899

Comprehensive Analysis of Hormone Formulations and Emotional Effects in Transgender Men Undergoing Hormone Replacement Therapy

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Introduction: Hormone replacement therapy (HRT) for transgender men involves various formulations of testosterone, each exhibiting unique pharmacokinetic profiles and emotional impacts. A comprehensive understanding of these variations is crucial for optimizing treatment outcomes and managing side effects effectively.

Objectives: This study aims to elucidate the differential emotional effects associated with various testosterone formulations used in HRT for transgender men.

Methods: A comprehensive literature review was conducted using databases such as PubMed, Scopus, and Web of Science. The review focused on four primary testosterone administration methods: intramuscular and subcutaneous injections, transdermal patches and gels, oral testosterone, and implantable pellets. Key metrics evaluated included pharmacokinetics, emotional effects, and nature of side effects.

Results: The review identified distinct pharmacokinetic profiles and emotional responses associated with each testosterone formulation:

Intramuscular and Subcutaneous Injections: These methods showed peak testosterone levels within 24-48 hours, followed by a decline over one to two weeks. Emotional effects included mood elevation and increased energy during the peak phase, with potential irritability or anxiety. The trough phase was marked by mood swings and depressive symptoms, particularly before the next injection. Side effects such as acne and libido changes peaked shortly after injection and decreased before the subsequent dose.

Transdermal Patches and Gels: These methods maintained consistent blood testosterone levels, resulting in stable mood and emotional states with reduced mood swings. Initial therapy adaptation caused mild mood changes, and side effects were primarily localized to skin irritation at application sites.

Oral Testosterone: Testosterone undecanoate offered stable testosterone levels with consistent mood regulation. Gastrointestinal side

effects were common, and emotional stability varied based on absorption rates and adherence to dosing schedules.

Implantable Pellets: These provided the most stable testosterone levels over several months, leading to very stable emotional states with minimal mood fluctuations. Side effects included localized reactions such as discomfort or infection at the implantation site, with minimal systemic side effects.

Conclusions: The choice of testosterone formulation significantly impacts the emotional well-being of transgender men undergoing HRT. Intramuscular and subcutaneous injections were associated with emotional fluctuations tied to hormone peaks and troughs, while transdermal, oral, and implantable methods provided more stable hormone levels and emotional states. Regular monitoring and individualized modifications are crucial to optimizing physiological and emotional outcomes and enhancing the quality of life for transgender men.

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Intellectual Disability

EPV0900

Involvement of loved ones in the rehabilitation process for severe neurotrauma in children

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Introduction: Among children with developmental disabilities, there is a group with consequences of neurotrauma that requires comprehensive support at different age stages, with the obligatory inclusion of the family in the rehabilitation process. These children are shown both medical and psychological and pedagogical rehabilitation, the effectiveness of which is determined by the active position of the patient's relatives.

Objectives: The study the factor of involvement of close patients with neurotrauma in the rehabilitation process: manifestations of psychophysical activity.

Methods: 140 children with neurotrauma consequences with neuropsychiatric disorders (2021-2024) and 136 families. Medical and pedagogical method with observation, examination, diagnostic and typological assessment of children's mental activity; cluster analysis of the results of studying families (parents) as participants in rehabilitation.

Results: Clusters were identified based on the assessment of the activity of parents' inclusion in the rehabilitation process:

Cluster 1. Active families (40%). The patient's relatives follow all the instructions of the specialists, are an important and integral part of the rehabilitation team. Children from the families studied show both qualitative and quantitative gains in rehabilitation, predominantly in the socio-communicative and cognitive domains.

Cluster 2. Estranged families (60%). Adults formally relate to rehabilitation activities. In children from these families, the dynamics of recovery is limited to an insignificant increase in psychophysical activity indicators, without transition to a higher level.